

June 1, 2010

Donald E. Williamson, M.D.  
State Health Officer  
Department of Public Health  
P. O. Box 303017  
Montgomery, AL 36130-3017

Dear Dr. Williamson:

The U.S. Nuclear Regulatory Commission (NRC) uses the Integrated Materials Performance Evaluation Program (IMPEP) in the evaluation of Agreement State programs. Enclosed for your review is the draft IMPEP report that documents the results of the Agreement State review held in Alabama on May 10-14, 2010. I was the team leader for the review. The review team's preliminary findings were discussed with you on the last day of the review. The review team's proposed recommendations are that the Alabama Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program.

NRC conducts periodic reviews of Agreement State programs to ensure that public health and safety are adequately protected from the potential hazards associated with the use of radioactive materials and that Agreement State programs are compatible with NRC's program. The process, titled IMPEP, employs a team of NRC and Agreement State staff to assess Agreement State and NRC Regional radioactive materials programs. All reviews use common criteria in the assessment and place primary emphasis on performance. Three additional areas applicable to your program have been identified as non-common performance indicators and are also addressed in the assessment. The final determination of adequacy and compatibility of each program, based on the review team's report, is made by a Management Review Board (MRB) composed of NRC managers and an Agreement State program manager, who serves as a liaison to the MRB.

In accordance with procedures for implementation of IMPEP, we are providing you with a copy of the review team's draft report for your review and comment prior to submitting the report to the MRB. Comments are requested within 4 weeks from your receipt of this letter. This schedule will permit the issuance of the final report in a timely manner that will be responsive to your needs.

The team will review your response, make any necessary changes to the report, and issue it to the MRB as a proposed final report. Coordinating with your staff, I scheduled the Alabama MRB meeting for Monday, July 19, 2010, from 2:00 p.m. to 3:30 p.m. EDT. NRC will provide invitational travel for you or your designee to attend the MRB meeting at NRC Headquarters in Rockville, Maryland. NRC has video conferencing capability if it is more convenient for the State to participate through this medium. Please contact me if you desire to establish a video conference for the meeting.

D. Williamson

-2-

If you have any questions regarding the enclosed report, please contact me at (630) 829-9650.

Thank you for your cooperation.

Sincerely,

***/RA/***

Aaron T. McCraw  
IMPEP Project Manager  
Division of Materials Safety and State Agreements  
Office of Federal and State Materials  
and Environmental Management Programs

Enclosure:  
Draft Alabama IMPEP Report

cc w/encl: James L. McNees, CHP, Director  
Office of Radiation Control

D. Williamson

-2-

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Enclosure:  
Draft Alabama IMPEP Report

cc w/encl: James L. McNeese, CHP, Director  
Office of Radiation Control

Distribution: (SP05)  
MBeardsley, FSME/MSSA  
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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF THE ALABAMA AGREEMENT STATE PROGRAM

MAY 10-14, 2010

**DRAFT REPORT**

Enclosure

## 1.0 INTRODUCTION

This report presents the results of the review of the Alabama Agreement State Program. The review was conducted during the period of May 10-14, 2010, by a review team composed of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the Commonwealths of Kentucky and Pennsylvania. Team members are identified in Appendix A. The review was conducted in accordance with the "Implementation of the Integrated Materials Performance Evaluation Program and Rescission of Final General Statement of Policy," published in the *Federal Register* on October 16, 1997, and NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)," dated February 26, 2004. Preliminary results of the review, which covered the period of April 8, 2006, to May 14, 2010, were discussed with Alabama managers on the last day of the review.

[A paragraph on the results of the Management Review Board (MRB) meeting will be included in the final report.]

The Alabama Agreement State Program is administered by the Office of Radiation Control (the Office), which is located within the Department of Public Health (the Department). The Office Director reports to the State Health Officer, who serves as the Director of the Department. Organization charts for the Department and the Office are included as Appendix B.

At the time of the review, the Alabama Agreement State Program regulated 458 specific licenses authorizing possession and use of radioactive materials. The review focused on the radioactive materials program as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between NRC and the State of Alabama.

In preparation for the review, a questionnaire addressing the common and applicable non-common performance indicators was sent to the Office on March 1, 2010. The Office provided its response to the questionnaire on April 15, 2010. A copy of the questionnaire response can be found in NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML101470488.

The review team's general approach for conduct of this review consisted of: (1) examination of the Office's response to the questionnaire; (2) review of applicable Alabama statutes and regulations; (3) analysis of quantitative information from the Office's database; (4) technical review of selected regulatory actions; (5) field accompaniments of two inspectors; and (6) interviews with staff and managers. The review team evaluated the information gathered against the established criteria for each common and the applicable non-common performance indicator and made a preliminary assessment of the Alabama Agreement State Program's performance.

Section 2.0 of this report covers the State's actions in response to any recommendations made during previous reviews. Results of the current review of the common performance indicators are presented in Section 3.0. Section 4.0 details the results of the review of the applicable non-common performance indicators, and Section 5.0 summarizes the review team's findings.

## 2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous IMPEP review, which concluded on April 7, 2006, the review team made no recommendations regarding the Alabama Agreement State Program's performance.

## 3.0 COMMON PERFORMANCE INDICATORS

Five common performance indicators are used to review NRC Regional and Agreement State radioactive materials programs. These indicators are: (1) Technical Staffing and Training, (2) Status of Materials Inspection Program, (3) Technical Quality of Inspections, (4) Technical Quality of Licensing Actions, and (5) Technical Quality of Incident and Allegation Activities.

### 3.1 Technical Staffing and Training

Issues central to the evaluation of this indicator include the Office's staffing level and staff turnover, as well as the technical qualifications and training histories of the staff. To evaluate these issues, the review team examined the Office's questionnaire response relative to this indicator, interviewed managers and staff, reviewed job descriptions and training records, and considered any workload backlogs.

When fully staffed, the Alabama Agreement State Program is composed of the Office Director, Assistant Director, and technical staff in two branches: the Radioactive Materials Inspection Branch and the Radioactive Materials Licensing Branch. A director heads each branch. Technical staff conducts inspections, performs licensing actions, and responds to incidents and allegations based on individual qualifications. Technical staff also has emergency response duties at Alabama's two operating nuclear power plants. Based on information provided by the Office, the review team estimated that the Office expends approximately 4.5 full-time equivalents (FTE) to administer the Agreement State program.

During the review period, one individual left the Agreement State program and no one joined the program; therefore, at the time of the review, the Office had one vacancy in the Agreement State program: the Assistant Director. The position became vacant in January 2010 after the former Assistant Director assumed the duties of the Office Director following the retirement of the former Office Director. Shortly thereafter, the former Assistant Director's promotion to the Office Director position became official. The Assistant Director position contributes approximately 0.25 FTE to the Agreement State program. The review team noted that the Assistant Director's Agreement State program duties had been temporarily absorbed by the Office Director and various technical staff members. At the time of the review, the Office had no immediate plans to fill the vacancy. The review team concluded that the vacancy does not have a major impact on the day-to-day operations of the Agreement State program as licensing and inspection backlogs have not developed since the position became vacant.

The Office has a documented training plan for technical staff that is consistent with the requirements in the NRC/Organization of Agreement States Training Working Group Report and NRC's Inspection Manual Chapter (IMC) 1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area." The Office uses on-the-job training, such as inspector accompaniments, to supplement formal coursework. Staff members are typically assigned increasingly complex duties as they progress through the qualification process. Staff

members are authorized to perform regulatory duties independently after demonstrating competency. The Office Director signs off on all staff qualifications at the recommendation of the appropriate branch director.

The review team noted that the Office Director encourages and supports training opportunities, based on program needs. The review team concluded that the Office's staffing and training is adequate to carry out its regulatory duties.

Based on the IMPEP evaluation criteria, the review team recommends that Alabama's performance with respect to the indicator, Technical Staffing and Training, be found satisfactory.

### 3.2 Status of Materials Inspection Program

The review team focused on five factors while reviewing this indicator: inspection frequency, overdue inspections, initial inspections of new licenses, timely dispatch of inspection findings to licensees, and performance of reciprocity inspections. The review team's evaluation was based on the Office's questionnaire response relative to this indicator, data gathered from the Office's database, examination of completed inspection casework, and interviews with managers and staff members.

The review team verified that the Office's inspection frequencies for all types of radioactive materials licenses are at least the same frequency as those listed in NRC's IMC 2800, "Materials Inspection Program." The Office conducts inspections of some license types; such as medical – written directive not required, nuclear pharmacy, medical broadscope, and nuclear laundry; more frequently than prescribed by IMC 2800. The review team also verified that the Office conducts inspections of multiple locations of use for multi-site licenses. In all instances reviewed by the team, the Office met or exceeded the minimum criterion of 20 percent of sites for licenses with five or more locations of use listed on the license.

The Office conducted a total of 412 Priority 1, 2, and 3 (high priority) inspections during the review period. The Office indicated in its response to the questionnaire, and the review team verified, that none of the 412 high priority inspections was conducted overdue by more than 25 percent of the inspection frequency prescribed by IMC 2800. The review team verified that no high priority inspections were overdue at the time of the review.

The review team also evaluated the Office's timeliness for conducting initial inspections. The review team noted that the Office issued 97 new licenses during the review period. The Office conducted 72 initial inspections, of which 5 were conducted greater than 12 months after license issuance as prescribed by IMC 2800. Of the 25 remaining new licenses, 12 licenses were issued to out-of-State firms with little to no work in Alabama during the review period, 4 licenses were terminated within the first 12 months, and the other 9 licenses had been issued within 12 months of the on-site portion of the IMPEP review and were not yet due for initial inspection. Overall, the review team calculated that the Office performed 1 percent of its Priority 1, 2, and 3 and initial inspections overdue during the review period.

The review team evaluated the Office's timeliness of issuance of inspection reports. The Office has a policy of issuing the inspection findings to licensees within 30 days from the date of the inspection. Inspectors are required to submit completed inspection reports to the Radioactive

Materials Inspection Branch Director within 15 days for supervisory review. Of the 19 inspection files reviewed, the review team did not identify any inspection findings that were issued beyond the 30-day goal.

In reviewing the Office's performance of reciprocity inspections, the review team noted that Alabama regulations only allow 30 days of use of radioactive materials in the State under reciprocity compared to NRC's allowing 180 days under reciprocity in NRC jurisdiction. After 30 days, an out-of-State Alabama radioactive materials license must be obtained. During the review period, the Office received requests for reciprocity from 66 Priority 1, 2 and 3 licensees and inspected an average of 13 percent of those licensees annually. IMC 1220, "Processing of NRC Form 241 and Inspection of Agreement State Licensees Operating Under 10 CFR 150.20," requires inspection of 20 percent of candidate licensees operating under reciprocity annually. Strictly by the numbers, the Office's performance of reciprocity inspections falls below the performance criterion in IMC 1220; however, factoring in Alabama's shortened period of reciprocity, the review team concluded that the Office's performance of reciprocity inspections over the review period was acceptable. The review team noted that the shortened period of reciprocity greatly limits the Office's opportunities to catch licensees under reciprocity performing licensed work in Alabama as many of the licensees only came into Alabama for 1-2 days for a few hours at a time. Out-of-State licensees that were performing significant, longer-term work in the State were required to get an Alabama license after 30 days and these licensees were inspected annually.

Based on the IMPEP evaluation criteria, the review team recommends that Alabama's performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory.

### 3.3 Technical Quality of Inspections

The review team evaluated inspection reports, enforcement documentation, and inspection field notes and interviewed the responsible inspector for 19 radioactive materials inspections conducted during the review period. The casework examined included a cross-section of inspections conducted by three current inspectors and covered a wide variety of inspection types. These included diagnostic nuclear medicine, high dose-rate remote afterloaders, industrial radiography, nuclear pharmacy, well logging, and research and development. The casework included initial, routine, followup, reciprocity, and Increased Controls inspections. Appendix C lists the inspection casework files reviewed.

Based on the evaluation of casework, the review team determined that inspections covered all aspects of the licensees' radiation safety and security programs. The review team noted that the inspections covered the Increased Controls, fingerprinting, and the National Source Tracking System when appropriate. The review team found that inspection reports were very thorough, complete, consistent, and of high quality with sufficient documentation to ensure that licensees' performances with respect to health, safety, and security were acceptable. Inspection report documentation supported violations, recommendations made to licensees, and unresolved safety issues. In addition to paper copies that are maintained in Montgomery, all inspection documentation is entered into the Office's electronic filing system, which is accessible to all staff members.

While on site, the review team evaluated the Office's handling and storing of sensitive documents. The review team determined that documents containing sensitive information were appropriately protected, segregated from other files (electronic and paper), and maintained in a manner to limit access. The review team found that outgoing correspondence was marked, as appropriate.

The Office has a policy to accompany all staff performing radioactive materials inspections on an annual basis. The Radioactive Materials Inspection Branch Director performs the inspector accompaniments. The review team verified that all staff members that regularly perform inspections were accompanied annually during the review period.

The review team accompanied two of the Office's inspectors during the period of April 26-28, 2010. The inspectors conducted inspections a medical licensee, an industrial radiography licensee, and a nuclear pharmacy licensee. The inspector accompaniments are listed in Appendix C. The inspectors demonstrated performance-based inspection techniques and knowledge of the regulations. The inspectors were well trained, prepared for the inspections, and thorough in their audits of the licensees' radiation safety and security programs. The inspectors conducted interviews with appropriate personnel, observed licensed operations, conducted confirmatory measurements, and utilized good health physics practices. The inspectors held entrance and exit meetings with the appropriate level of licensee management. The review team determined that the inspections were adequate to assess radiological health, safety, and security at the licensed facilities.

Based on the IMPEP evaluation criteria, the review team recommends that Alabama's performance with respect to the indicator, Technical Quality of Inspection, be found satisfactory.

#### 3.4 Technical Quality of Licensing Actions

The review team examined completed licensing casework and interviewed license reviewers for 28 licensing actions for 22 specific licenses. Licensing actions were reviewed for completeness, consistency, proper radioisotopes and quantities, qualifications of authorized users, adequacy of facilities and equipment, adherence to good health physics practices, financial assurance, security requirements, operating and emergency procedures, appropriateness of license conditions, and overall technical quality. The casework was also reviewed for timeliness, use of appropriate correspondence, reference to appropriate regulations, supporting documentation, consideration of enforcement history, pre-licensing visits, peer or supervisory review, and proper signatures.

The licensing casework was selected to provide a representative sample of licensing actions completed during the review period. Licensing actions selected for evaluation include 12 new licenses, 2 renewals, 11 amendments, and 3 license terminations. Casework reviewed included a cross-section of license types, including: medical and academic broadscope, medical institution – limited, private practice, mobile nuclear medicine, nuclear laundry, radiography, portable gauge, fixed gauge, and self-shielded irradiator. A listing of the licensing casework reviewed can be found in Appendix D.

The review team found that the licensing actions were thorough, complete, consistent, and of high quality with health, safety, and security issues properly addressed. License tie-down

conditions were stated clearly, backed by information contained in the file and enforceable. The review team found that actions terminating licenses were well documented, included the appropriate material survey records, and contained documentation of proper disposal or transfer of radioactive material, as appropriate. The review team determined that the exemptions to Alabama's regulations that the Office granted during the review period and noted in its questionnaire response were appropriate.

During the licensing casework evaluations, the review team noted the Office's use of information technology to maintain records of authorized users, authorized nuclear pharmacists, authorized medical physicists, and radiation safety officers listed on licenses in the State of Alabama. The Office maintains the records in a searchable database. The Office creates a record for each individual and lists each license on which that individual holds one of the aforementioned positions and, for authorized users, the modalities for which that individual has met the training and experience requirements. This database increases the efficiency of the Office's review of an individual's qualifications when a licensee requests that an individual be added to their license for a particular position or modality. With this database, the Office can quickly verify if the individual is already listed on another license in the State of Alabama and if that individual is indeed qualified to perform the duties for the position requested by the licensee. The review team recommends that the development and implementation of a user qualification database be identified as a good practice.

The review team assessed the Office's implementation of the pre-licensing guidance. The Office has implemented the essential elements of NRC's pre-licensing guidance issued on September 22, 2008 and transmitted to the Agreement States via Office of Federal and State Materials and Environmental Management Programs (FSME) Letter RCPD-08-020, "Requesting Implementation of the Checklist to Provide a Basis for Confidence That Radioactive Material Will Be Used as Specified on a License and the Checklist for Risk-significant Radioactive Material." The Office has a policy of hand-delivering all new licenses issued within the State of Alabama. Staff has the authority to withhold the license if suspicious activity is detected during delivery of the license. The hand-delivery of a new license constitutes a pre-licensing visit.

The review team evaluated the documentation for the pre-licensing visits of new applicants performed during the review period. The review team identified two cases where the applicant had not fully implemented the Increased Controls requirements prior to delivery and issuance of the license, as required in NRC's pre-licensing guidance. In both cases, the facilities were still under construction; therefore, the Increased Controls requirements could not be fully implemented. The staff member that delivered the licenses documented the areas of the Increased Controls requirements where the licensees were deficient. The review team clarified the requirements of the pre-licensing guidance regarding the delivery and issuance of licenses when all regulatory requirements have not been met at the time of the site visit. After the clarification, the Office recognized the need to provide specific guidance to inspectors, who perform the majority of pre-licensing visits, on when to withhold delivery of the license if all regulatory requirements are not in place at the time of the visit. The Office prepared a draft of the guidance while the review team was still on site.

Based on the IMPEP evaluation criteria, the review team recommends that Alabama's performance with respect to the indicator, Technical Quality of Licensing Actions, be found satisfactory.

### 3.5 Technical Quality of Incident and Allegation Activities

In evaluating the effectiveness of the Office's actions in responding to incidents and allegations, the review team examined the response to the questionnaire relative to this indicator, evaluated selected incidents reported for Alabama in the Nuclear Material Events Database (NMED) against those contained in the Office's files, and evaluated the casework for 20 of the 98 reported radioactive materials incidents. A listing of the casework examined can be found in Appendix E. The review team evaluated the Office's response to 18 allegations involving radioactive materials reported directly to the State during the review period. The review team also reviewed the documentation for and discussed with Office managers the ongoing investigation for one allegation that NRC referred to the State during the review period.

When notified of an incident or an allegation, the inspection staff discusses the initial response and the need for an on-site investigation, based on the safety significance. The Office maintains a log book, database, and file system for tracking the status of all incidents and allegations. If the incident meets the reportability thresholds, as established in FSME Procedure SA-300 "Reporting Material Events," the Office notifies the NRC Headquarters Operations Center. If the investigation is complex and extends over a period of time, the Office updates the respective NMED record, using the NMED software. Of the 20 incidents evaluated by the review team, all had been reported to NRC within the required time frame and had been properly completed in NMED.

The incidents selected for review included lost or stolen radioactive material, medical, damaged equipment, overexposure, contamination, and equipment failures. The review team determined that the Office's responses to incidents were thorough, complete, and comprehensive. Initial responses were prompt and well coordinated, and the level of effort was commensurate with the health and safety significance. The Office immediately dispatched inspectors to a site when the possibility of an immediate threat to public health and safety existed. When no immediate threat was present and the Office determined that the licensee had qualified, competent individuals investigating the incident; the Office generally responded telephonically with subsequent review of the licensee's written report or an on-site followup at a later date. The review team noted that at the conclusion of investigations, inspectors generated narrative reports that thoroughly documented the investigations.

The review team also evaluated four radioactive materials incidents in the Office's files that were not reported to NRC to determine if the events should have been reported in accordance with the criteria in FSME Procedure SA-300. The review team determined that these events were not required to be reported under the criteria.

In evaluating the effectiveness of the Office's response to allegations, the review team evaluated the completed casework for 18 allegations. The review team concluded that the Office consistently took prompt and appropriate action in response to concerns raised. The review team noted that the Office thoroughly documented the investigations and retained all necessary documentation to appropriately close the allegations. The Office notified the allegers of the conclusion of their investigation. The review team determined that the Office adequately protected the identity of allegers.

Based on the IMPEP evaluation criteria, the review team recommends that Alabama's performance with respect to the indicator, Technical Quality of Incident and Allegation Activities, be found satisfactory.

#### 4.0 NON-COMMON PERFORMANCE INDICATORS

##### 4.1 Compatibility Requirements

###### 4.1.1 Legislation

Alabama became an Agreement State on October 1, 1966. Legislative authority to create the program and enter into an Agreement with NRC was established in 1963 (Acts of 1963, No. 582). The State Board of Health is designated as the State's radiation control agency.

The review team examined one legislative bill that was passed during the review period that affected the Agreement State program. On March 4, 2010, the Governor signed a bill into effect that requires all applicants for licensure in the State of Alabama to be a citizen of the United States or a person who is legally present in the United States with appropriate documentation from the federal government. The Office Director stated that the bill had little effect on the Office's licensing practices.

###### 4.1.2 Program Elements Required for Compatibility

Alabama's regulations for the control of radiation are located in Chapter 420-3-26 of the Alabama regulations for Control of Radiation and apply to ionizing and non-ionizing radiation, whether emitted from radionuclides or devices. Alabama requires a license for possession and use of all radioactive materials, including diffuse sources of naturally occurring radioactive material.

The review team verified that the State's rulemaking process offers the public and other interested parties an opportunity to comment on proposed regulation changes. The Office sends proposed regulation changes to NRC for a compatibility review during the public comment period. After the Office addresses any comments on the proposed regulations, the rulemaking package goes to the Alabama Office of General Counsel for review and the State Committee of Public Health for approval. The review team found that the rulemaking process typically takes 5-6 months. The State has Emergency Rule capability, if public health and safety are at risk.

Although the State's rules and regulations are not subject to sunset laws, the entire program is subject to a sunset review every 4 years by a State agency called the Examiners of Public Accounts. In its most recent review in 2009, the Examiners of Public Accounts recommended that the program continue for another 4 years. The Alabama Legislature voted favorably on the recommendation.

The review team evaluated Alabama's response to the questionnaire relative to this indicator, reviewed the status of regulations required to be adopted by the State under the Commission's adequacy and compatibility policy, and verified the adoption of regulations with data obtained from FSME's State Regulation Status Data Sheet.

Current NRC policy requires that Agreement States adopt certain equivalent regulations or legally binding requirements no later than 3 years after the effective date of NRC's regulations. At the time of this review, the following two amendments had not been reviewed for compatibility by NRC and were considered overdue:

- "Compatibility with IAEA Transportation Safety Standards and Other Transportation Safety Amendments," 10 CFR Part 71 amendment (69 FR 3697), that was due for Agreement State implementation on October 10, 2007.

Status: The Office did not take any specific action to address this regulation amendment, because it believes that Alabama's regulations were already compatible with this amendment. At the time of the review, the Office was preparing document to submit to NRC for a compatibility review to close out this regulation amendment.

- "National Source Tracking System – Serialization Requirements," 10 CFR Part 32 amendment (71 FR 65685), that was due for Agreement State implementation on February 6, 2007.

Status: The Office does not regulate any licensees to which these requirements apply. The Office has drafted proposed regulations that address this amendment and submitted to NRC for a compatibility review on April 19, 2010, to ensure that any future licensees will be subjected to these requirements, as appropriate.

The review team identified the following regulation amendments that the Office will need to address in the future:

- "Medical Use of Byproduct Material – Minor Corrections and Clarifications," 10 CFR Parts 32 and 35 amendment (72 FR 45147, 54207), that is due for Agreement State adoption by October 29, 2010.
- "Requirements for Expanded Definition of Byproduct Material," 10 CFR Parts 20, 30, 31, 32, 33, 35, 61, 150 amendment (72 FR 55864), that is due for Agreement State adoption by November 30, 2010.
- "Exemptions from Licensing, General Licenses, and Distribution of Byproduct Material; Licensing and Reporting Requirements," 10 CFR Parts 30, 31, 32, 150 amendment (72 FR 58473), that is due for Agreement State adoption by December 17, 2010.
- "Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent," 10 CFR Parts 19, 20 amendment (72 FR 68043), that is due for Agreement State adoption by February 15, 2011.
- "Medical Use of Byproduct Material – Authorized User Clarification," 10 CFR Part 35 amendment (74 FR 33901), that is due for Agreement State adoption by September 28, 2012.

The review team noted that, at the time of the review, the Office was in the process of addressing one of the overdue amendments and all amendments that are coming due in one rulemaking package. The Office submitted its proposed regulations to NRC for a compatibility review on April 19, 2010. The Office indicated that, barring any major comments on the proposed regulations, the rulemaking package should be adopted and effective by September 2010.

Based on the IMPEP evaluation criteria, the review team recommends that Alabama's performance with respect to the indicator, Compatibility Requirements, be found satisfactory.

#### 4.2 Sealed Source and Device Evaluation Program

Although the Alabama Agreement State Program has authority to conduct sealed source and device (SS&D) evaluations for byproduct, source, and certain special nuclear materials; the Office did not conduct any SS&D evaluations during the review period. Accordingly, the review team did not review this indicator.

#### 4.3 Low-level Radioactive Waste Disposal Program

In 1981, NRC amended its Policy Statement, "Criteria for Guidance of States and NRC in Discontinuance of NRC Authority and Assumption Thereof by states Through Agreement," to allow a State to seek an amendment for the regulation of low-level radioactive waste (LLRW) as a separate category. Those States with existing Agreements prior to 1981 were determined to have continued LLRW disposal authority without the need of an amendment. Although the Alabama Agreement State Program has authority to regulate a LLRW disposal facility, NRC has not required States to have a program for licensing a disposal facility until such time as the State has been designated as a host State for a LLRW disposal facility. When an Agreement State has been notified or becomes aware of the need to regulate a LLRW disposal facility, it is expected to put in place a regulatory program that will meet the criteria for an adequate and compatibility LLRW program. There are no plans for a commercial LLRW disposal facility in Alabama. Accordingly, the review team did not review this indicator.

### 5.0 SUMMARY

As noted in Sections 3.0 and 4.0 above, the review team found Alabama's performance to be satisfactory for all performance indicators reviewed. The review team made no recommendations regarding program performance by the State and identified one potential good practice. Overall, the review team recommends that the Alabama Agreement State Program be found adequate to protect public health and safety and compatible with NRC's program. Based on the results of the current IMPEP review, the review team recommends that the next full IMPEP review take place in approximately 4 years.

Below is the potential good practice, as mentioned earlier in the report:

The Office has developed a searchable database to maintain records of authorized users, authorized nuclear pharmacists, authorized medical physicists, and radiation safety officers listed on licenses in the State of Alabama. The Office creates a record for each individual and lists each license on which that individual holds one of the

aforementioned positions and, for authorized users, the modalities for which that individual has met the training and experience requirements. This database increases the efficiency of the Office's review of an individual's qualifications when a licensee requests that an individual be added to their license for a particular position or modality. With this database, the Office can quickly verify if the individual is already listed on another license in the State of Alabama and if that individual is indeed qualified to perform the duties for the position requested by the licensee.

## LIST OF APPENDIXES

Appendix A	IMPEP Review Team Members
Appendix B	Alabama Organization Charts
Appendix C	Inspection Casework Reviews
Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Area of Responsibility</b>
Aaron McCraw, FSME	Team Leader Technical Staffing and Training Compatibility Requirements
Dwight Shearer, Pennsylvania	Status of Materials Inspection Program Technical Quality of Inspections Inspector Accompaniments
Michele Greenwell, Kentucky	Technical Quality of Licensing Actions
James Kottan, Region I	Technical Quality of Incident and Allegation Activities

APPENDIX B

ALABAMA ORGANIZATION CHARTS

ADAMS ACCESSION NO.: ML101470512

## APPENDIX C

### INSPECTION CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1 Licensee: Gadsden Nuclear Pharmacy Inspection Type: Routine, Unannounced Inspection Dates: 5/28/09	License No.: 1418 Priority: 1 Inspectors: MR
File No.: 2 Licensee: Gulf Coast Pharmacy Inspection Type: Routine, Unannounced Inspection Dates: 8/21/09	License No.: 1492 Priority: 1 Inspector: CC
File No.: 3 Licensee: Southeast Apothecary Inspection Type: Routine, Unannounced Inspection Dates: 8/28/09	License No.: 1461 Priority: 1 Inspectors: DT
File No.: 4 Licensee: Applied Tech Services Inspection Type: Routine, Unannounced Inspection Date: 2/24/10	License No.: 1454 Priority: 1 Inspectors: MR
File No.: 5 Licensee: Cardinal Health Inspection Type: Routine, Unannounced Inspection Date: 3/31/10	License No.: 1068 Priority: 1 Inspectors: CC
File No.: 6 Licensee: IonSouth Diagnostic Inspection Type: Routine, Unannounced Inspection Date: 4/21/10	License No.: 1493 Priority: 1 Inspector: MR
File No.: 7 Licensee: Quality Inspections Services Inspection Type: Routine, Unannounced Inspection Date: 02/23/2010	License No.: 1518 Priority: 1 Inspectors: Riley
File No.: 8 Licensee: Brookwood Medical Center Inspection Type: Routine, Unannounced Inspection Date: 4/27/10	License No.: 0459 Priority: 2 Inspector: CC

File No.: 9 Licensee: Trinity Medical Center Inspection Type: Routine, Unannounced Inspection Date: 9/8/09	License No.: 0593 Priority: 2 Inspectors: CC
File No.: 10 Licensee: Walker Medical Diagnostic Inspection Type: Routine, Unannounced Inspection Date: 3/16/07	License No.: 1428 Priority: 3 Inspectors: CC
File No.: 11 Licensee: Venkatapuram Inspection Type: Routine, Unannounced Inspection Date: 4/10/07	License No.: 1389 Priority: 3 Inspector: CC
File No.: 12 Licensee: Medworks Inspection Type: Routine, Unannounced Inspection Date: 11/2/07	License No.: 1343 Priority: 3 Inspector: CC
File No.: 13 Licensee: Huntsville Cardiology Inspection Type: Routine, Unannounced Inspection Date: 8/1/08	License No.: 1268 Priority: 3 Inspector: CC
File No.: 14 Licensee: Southern Company Gen Inspection Type: Routine, Unannounced Inspection Date: 3/11/10	License No.: 0644 Priority: 3 Inspector: MR
File No.: 15 Licensee: Professional Services Industrials Inspection Type: Routine, Unannounced Inspection Date: 9/9/09	License No.: 0368 Priority: 1 Inspector: MR
File No.: 16 Licensee: Wyle Labs Inspection Type: Routine, Unannounced Inspection Date: 10/8/08	License No.: 0525 Priority: 2 Inspector: CC
File No.: 17 Licensee: Mobile Infirmary Inspection Type: Routine, Unannounced Inspection Date: 5/8/09	License No.: 282 Priority: 2 Inspector: MR

File No.: 18  
Licensee: NeXolve  
Inspection Type: Reciprocity, Announced  
Inspection Date: 3/24/05

License No.: 1296  
Priority: 5  
Inspector: DT

File No.: 19  
Licensee: APAC - Midsouth  
Inspection Type: Reciprocity, Announced  
Inspection Date: 9/16/05

License No.: 0701  
Priority: 5  
Inspector: DT

### INSPECTOR ACCOMPANIMENTS

The following inspector accompaniments were performed prior to the on-site IMPEP review:

Accompaniment No.: 1  
Licensee: Brookwood Medical Center  
Inspection Type: Routine, Unannounced  
Inspection Date: 4/26/10

License No.: 0459  
Priority: 2  
Inspector: CC

Accompaniment No.: 2  
Licensee: MISTRAS Group, Inc  
Inspection Type: Routine, Unannounced  
Inspection Date: 4/27/10

License No.: 1075  
Priority: 1  
Inspector: CC

Accompaniment No.: 3  
Licensee: Triad Isotopes  
Inspection Type: Routine, Unannounced  
Inspection Date: 4/28/10

License No.: 1399  
Priority: 1  
Inspector: MR

## APPENDIX D

### LICENSE CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1

Licensee: Eastern Technologies, Inc.

Type of Action: Amendment

Date Issued: 6/9/09

License No.: 0947

Amendment No.: 19

License Reviewers: NM, DW

File No.: 2

Licensee: Auburn University

Type of Action: Amendments

Dates Issued: 2/5/09, 7/22/09

License No.: 0248

Amendment Nos.: 71 and 72

License Reviewers: NM, DW

File No.: 3

Licensee: Alabama Department of Transportation

Type of Action: Amendment

Dates Issued: 7/29/09

License No.: 0257

Amendment No.: 49

License Reviewer: NM

File No.: 4

Licensee: Digirad Imaging Solutions

Type of Action: Amendment

Date Issued: 3/9/10

License No.: 1511

Amendment No.: 11

License Reviewers: NM, DW

File No.: 5

Licensee: Baptist Medical Center

Type of Action: Amendment

Date Issued: 1/10/08

License No.: 0610

Amendment No.: 58

License Reviewers: NM, DW

File No.: 6

Licensee: The PET Center of Oxford, LLC

Type of Action: Termination

Date Issued: 2/20/09

License No.: 1386

Amendment No.: 4

License Reviewers: NM, DW

File No.: 7

Licensee: Cox Environmental and Geologic, LLC

Type of Action: Termination

Date Issued: 12/22/09

License No.: 1402

Amendment No.: 2

License Reviewers: NM, CC, KW

File No.: 8

Licensee: Alabama A & M

Type of Action: Termination

Date Issued: 3/11/09

License No.: 984

Amendment No.: 7

License Reviewers: NM, DW

File No.: 9

Licensee: University of South Alabama  
Type of Action: Renewal  
Date Issued: 11/14/08

License No.: 0584  
Amendment No.: 67  
License Reviewers: NM, DW, DT

File No.: 10

Licensee: 3-M Corporate Health Physics  
Type of Action: Renewal  
Date Issued: 2/5/10

License No.: 0148  
Amendment No.: 53  
License Reviewers: NM, DW

File No.: 11

Licensee: Nucor Steel  
Types of Action: New, Amendments  
Dates Issued: Various

License No.: 1472  
Amendment Nos.: Various  
License Reviewers: NM, DW

File No.: 12

Licensee: Quality Inspection and Territory  
Types of Action: New, Amendments  
Dates Issued: Various

License No.: 1518  
Amendment No.: Various  
License Reviewers: NM, DW

File No.: 13

Licensee: Maintenance Dredging, LLC  
Type of Action: New  
Date Issued: 4/15/10

License No.: 1529  
Amendment No.: N/A  
License Reviewers: NM, DW

File No.: 14

Licensee: Northrop Grumman System Corporation  
Type of Action: New  
Date Issued: 5/15/09

License No.: 1512  
Amendment No.: N/A  
License Reviewer: DW

File No.: 15

Licensee: Weaver Boos Consultants  
Type of Action: New  
Date Issued: 7/7/09

License No.: 1517  
Amendment No.: N/A  
License Reviewer: DW

File No.: 16

Licensee: Progress Rail Services  
Type of Action: New  
Date Issued: 5/28/10

License No.: 1513  
Amendment No.: N/A  
License Reviewer: DW

File No.: 17

Licensee: Bunnell-Lammons Engineering  
Type of Action: New  
Date Issued: 9/28/09

License No.: 1521  
Amendment No.: N/A  
License Reviewer: DW

File No.: 18

Licensee: Eastern Shore Radiation Oncology  
Type of Action: New  
Date Issued: 6/12/09

License No.: 1515  
Amendment No.: N/A  
License Reviewers: NM, DW

File No.: 19

Licensee: Faizullah, Sayed  
Type of Action: New  
Date Issued: 3/2/10

License No.: 1525  
Amendment No.: N/A  
License Reviewers: NM, DW

File No.: 20

Licensee: Internal Medicine Center  
Type of Action: New  
Date Issued: 6/12/10

License No.: 1516  
Amendment No.: N/A  
License Reviewers: NM, DW

File No.: 21

Licensee: Thyssen Krup Steel  
Type of Action: New  
Date Issued: 2/25/10

License No.: 1528  
Amendment No.: N/A  
License Reviewer: DW

File No.: 22

Licensee: Nucor  
Type of Action: New  
Date Issued: 5/10/10

License No.: 1426  
Amendment No.: N/A  
License Reviewers: NM, DW

## APPENDIX E

### INCIDENT CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS.

File No.: 1  
Licensee: Cardinal Health  
Date of Incident: 4/11/06  
Investigation Date: 5/27/06  
License No.: 1168  
NMED No.: 060389  
Type of Incident: Medical  
Type of Investigation: Licensee Report

File No.: 2  
Licensee: BP Amoco Chemical Co.  
Date of Incident: 8/12/06  
Investigation Date: 8/30/06  
License No.: 0256  
NMED No.: 060718  
Type of Incident: Equipment Failure  
Type of Investigation: Licensee Report

File No.: 3  
Licensee: Building and Earth Sciences, Inc.  
Date of Incident: 11/12/06  
Investigation Date: 11/13/06  
License No.: 1266  
NMED No.: 060701  
Type of Incident: Lost/stolen Material  
Type of Investigation: Telephone

File No.: 4  
Licensee: Appalachian Cardiovascular Assoc.  
Date of Incident: 10/31/06  
Investigation Date: 11/28/06  
License No.: 1357  
NMED No.: 070279  
Type of Incident: Medical  
Type of Investigation: Telephone

File No.: 5  
Licensee: Building and Earth Sciences  
Date of Incident: 6/11/07  
Investigation Date: 6/29/07  
License No.: 1266  
NMED No.: 070365  
Type of Incident: Damaged Equipment  
Type of Investigation: Telephone

File No.: 6  
Licensee: Vital Inspection Professionals, Inc.  
Date of Incident: 7/26/07  
Investigation Date: 7/26/07  
License No.: 1118  
NMED No.: 070484  
Type of Incident: Equipment Failure  
Type of Investigation: Telephone

File No.: 7  
Licensee: Montgomery Cancer Center  
Date of Incident: 1/2/08  
Investigation Date: 1/2/08  
License No.: 1064  
NMED No.: 080137  
Type of Incident: Lost/stolen Material  
Type of Investigation: Telephone

File No.: 8

Licensee: GE Energy Inspection Services  
Date of Incident: 5/19/08  
Investigation Date: 5/19/08

License No.: 754  
NMED No.: 080340  
Type of Incident: Damaged Equipment  
Type of Investigation: Telephone

File No.: 9

Licensee: Birmingham Engineering  
and Construction Consultants  
Date of Incident: 7/1/08  
Investigation Date: 7/1/08

License No.: 1142  
NMED No.: 080453  
Type of Incident: Damaged Equipment  
Type of Investigation: Site

File No.: 10

Licensee: Birmingham Engineering  
and Construction Consultants  
Date of Incident: 8/28/08  
Investigation Date: 8/28/08

License No.: 1142  
NMED No.: 080502  
Type of Incident: Lost/stolen Material  
Type of Investigation: Telephone

File No.: 11

Licensee: Gallet and Associates  
Date of Incident: 1/13/09  
Investigation Date: 1/13/09

License No.: 0991  
NMED No.: 090067  
Type of Incident: Lost/stolen Material  
Type of Investigation: Telephone

File No.: 12

Licensee: Bhate Engineering  
Date of Incident: 1/23/09  
Investigation Date: 1/23/09

License No.: 0655  
NMED No.: 090297  
Type of Incident: Damaged Equipment  
Type of Investigation: Telephone

File No.: 13

Licensee: Unified Testing Services  
Date of Incident: 2/11/09  
Investigation Dates: 2/11/09

License No.: 1128  
NMED Log No.: 090450  
Type of Incident: Overexposure  
Type of Investigation: Telephone

File No.: 14

Licensee: Qore  
Date of Incident: 2/18/09  
Investigation Date: 2/18/09

License No.: 0708  
NMED Log No.: 090277  
Type of Incident: Lost/stolen Material  
Type of Investigation: Telephone

File No.: 15  
Licensee: Tocoa Minerals, LLC  
Date of Incident: 8/26/08  
Investigation Date: 2/26/09

License No.: 1442  
NMED No.: 090503  
Type of Incident: Loss of Control  
Type of Investigation: Site

File No.: 16  
Licensee: B.F. Goodrich  
Date of Incident: 4/23/09  
Investigation Date: 4/24/09

License No.: N/A  
NMED No.: 090473  
Type of Incident: Lost/stolen Material  
Type of Investigation: Telephone

File No.: 17  
Licensee: Northwest Medical Center  
Date of Incident: 7/23/09  
Investigation Date: 7/23/09

License No.: 1368  
NMED No.: 090684  
Type of Incident: Contamination  
Type of Investigation: Telephone

File No.: 18  
Licensee: PSI, Inc.  
Dates of Incident: 8/20-21/09  
Investigation Dates: 8/26/09, 9/9/09

License No.: 0368  
NMED No.: 090816  
Type of Incident: Equipment Failure  
Types of Investigation: Telephone, Site

File No.: 19  
Licensee: U.S. Steel  
Date of Incident: 11/17/09  
Investigation Dates: 11/17/09, 11/20/09

License No.: N/A  
NMED Log No.: 090845  
Type of Incident: Abandoned Material  
Type of Investigation: Telephone, Site

File No.: 20  
Licensee: University of Alabama at Birmingham  
Date of Incident: 1/6/10  
Investigation Date: 1/7/10

License No.: 0266  
NMED Log No.: 100098  
Type of Incident: Medical  
Type of Investigation: Telephone